VOL. 1. No. 20. SEPTEMBER 29, 1904

THE JOURNAL OF PHILOSOPHY
PSYCHOLOGY AND SCIENTIFIC METHODS

A WORLD OF PURE EXPERIENCE. I.

IT is difficult not to notice a curious unrest in the philosophic atmosphere of the time, a loosening of old landmarks, a softening of oppositions, a mutual borrowing from one another on the part of systems anciently closed, and an interest in new suggestions, however vague, as if the one thing sure were the inadequacy of the extant school-solutions. The dissatisfaction with these seems due for the most part to a feeling that they are too abstract and academic. Life is confused and superabundant, and what the younger generation appears to crave is more of the temperament of life in its philosophy, even though it were at some cost of logical vigor and of formal purity. Transcendental idealism is inclining to let the world wag incomprehensibly, in spite of its Absolute Subject and his unity of purpose. Berkeleyan idealism is abandoning the principle of parsimony and dabbling in panpsychic speculations. Empiricism flirts with teleology; and, strangest of all, natural realism, so long decently buried, raises its head above the turf, and finds glad hands outstretched from the most unlikely quarters to help it to its feet again. We are all biased by our personal feelings, I know, and I am personally discontented with extant solutions, so I seem to read the signs of a great unsettlement, as if the upheaval of more real conceptions and more fruitful methods were imminent, as if a true landscape might result, less clipped, straight edged and artificial.

If philosophy be really on the eve of any considerable rearrangement, the time should be propitious for any one who has suggestions of his own to bring forward. For many years past my mind has been growing into a certain type of *Weltanschauung*. Rightly or wrongly, I have got to the point where I can hardly see things in any other pattern. I propose, therefore, to describe the pattern as clearly as I can consistently with great brevity, and to throw my description into the bubbling vat of publicity where, jostled by rivals and torn by critics, it will eventually either disappear from notice, or else, if better luck befall it, quietly subside to the profundities, and serve as a possible ferment of new growths or a nucleus of new crystallization.

I. Radical Empiricism

I give the name of 'radical empiricism' to my *Weltanschauung.* Empiricism is known as the opposite of rationalism. Rationalism tends to emphasize universals and to make wholes prior to parts in the order of logic as well as in that of being. Empiricism, on the contrary, lays the explanatory stress upon the part, the element, the individual, and treats the whole as a collection and the universal as an abstraction. My description of things, accordingly, starts with the parts and makes of the whole a being of the second order. It is essentially a mosaic philosophy, a philosophy of plural facts, like that of Hume and his descendants, who refer these facts neither to Substances in which they inhere nor to an Absolute Mind that creates them as its objects. But it differs from the Humian type of empiricism in one particular which makes me add the epithet radical.

To be radical, an empiricism must neither admit into its constructions any element that is not directly experienced, nor exclude from them any element that is directly experienced. For such a philosophy, *the relations that connect experiences must themselves be experienced relations, and any kind of relation experienced must be accounted as 'real' as anything else in the system.* Elements may indeed be redistributed, the original placing of things getting corrected, but a real place must be found for every kind of thing experienced, whether term or relation, in the final philosophic arrangement.

Now, ordinary empiricism, in spite of the fact that conjunctive and disjunctive relations present themselves as being fully coordinate parts of experience, has always shown a tendency to do away with the connections of things, and to insist most on the disjunctions. Berkeley's nominalism, Hume's statement that whatever things we distinguish are as 'loose and separate' as if they had 'no manner of connection,' James Mill's denial that similars have anything 'really' in common, the resolution of the causal tie into habitual sequence, John Mill's account of both physical things and selves as composed of discontinuous possibilities, and the general pulverization of all Experience by association and the mind-dust theory, are examples of what I mean.

The natural result of such a world-picture has been the efforts of naturalism to correct its incoherencies by the addition of trans-experiential agents of unification, substances, intellectual categories and powers, or Selves; whereas, if empiricism had only been radical and taken every thing that comes without disfavor, conjunction as well as separation, each at its face value, the results would have called for no such artificial correction. *Radical empiricism,* as I understand it, *does full justice to conjunctive relations,* without, however, treating them as rationalism always tends to treat them, as

being true in some supernal way, as if the unity of things and their variety belonged to different orders of truth and vitality altogether.

II. Conjunctive Relations

Relations are of different degrees of intimacy. Merely to be 'with' one another in a universe of discourse is the most external relation that terms can have, and seems to involve nothing whatever as to farther consequences. Simultaneity and time-interval come next, and then space-adjacency and distance. After them, similarity and difference, carrying the possibility of many inferences. Then relations of activity, tying terms into series involving change, tendency, resistance, and the causal order generally. Finally, the relation experienced between terms that form states of mind, and are immediately conscious of continuing each other. The organization of the Self as a system of memories, purposes, strivings, fulfilments or disappointments, is incidental to this most intimate of all relations, the terms of which seem in many cases actually to compenetrate and suffuse each other's being.

Philosophy has always turned on grammatical particles. With, near, next, like, from, towards, against, because, for, through, my —these words designate types of conjunctive relation arranged in a roughly ascending order of intimacy and inclusiveness. *A priori,* we can imagine a universe of withness but no nextness; or one of nextness but no likeness, or of likeness with no activity, or of activity with no purpose, or of purpose with no ego. These would be universes, each with its own grade of unity. The universe of human experience is, by one or another of its parts, of each and all these grades. Whether or not it possibly enjoys some still more absolute grade of union does not appear upon the surface.

Taken as it does appear, our universe is to a large extent chaotic. No one single type of connection runs through all the experiences that compose it. If we take space-relations, they fail to connect minds into any regular system. Causes and purposes obtain only among special series of facts. The self relation seems extremely limited and does not link two different selves together. *Prima facie,* if you should liken the universe of absolute idealism to an aquarium, a crystal globe in which goldfish are swimming, you would have to compare the empiricist universe to something more like one of those dried human heads with which the Dyaks of Borneo deck their lodges. The skull forms a solid nucleus; but innumerable feathers, leaves, strings, beads, and loose appendices of every description float and dangle from it, and save that they terminate in it, seem to have nothing to do with one another. Even so my experiences and yours float and dangle, terminating, it is true, in a nucleus of common

perception, but for the most part out of sight and irrelevant and unimaginable to one another. This imperfect intimacy, this bare relation of *withness* between some parts of the sum total of experience and other parts, is the fact that ordinary empiricism overemphasizes against rationalism, the latter always tending to ignore it unduly. Radical empiricism, on the contrary, is fair to both the unity and the disconnection. It finds no reason for treating either as illusory. It allots to each its definite sphere of description, and agrees that there appear to be actual forces at work which tend, as time goes on, to make the unity greater.

The conjunctive relation that has given most trouble to philosophy is *the co-conscious transition,* so to call it, by which one experience passes into another when both belong to the same self. About the facts there is no question. My experiences and your experiences are 'with' each other in various external ways, but mine pass into mine, and yours pass into yours in a way in which yours and mine never pass into one another. Within each of our personal histories, subject, object, interest and purpose *are continuous or may be continuous.*[1] Personal histories are processes of change in time, and *the change itself is one of the things immediately experienced.* 'Change' in this case means continuous as opposed to discontinuous transition. But continuous transition is one sort of a conjunctive relation; and to be a radical empiricist means to hold fast to this conjunctive relation of all others, for this is the strategic point, the position through which, if a hole be made, all the corruptions of dialectics and all the metaphysical fictions pour into our philosophy. The holding fast to this relation means taking it at its face value, neither less nor more; and to take it at its face value means first of all to take it just as we feel it, and not to confuse ourselves with abstract talk *about* it, involving words that drive us to invent secondary conceptions in order to neutralize their suggestions and to make our actual experience again seem rationally possible.

What I do feel simply when a later moment of my experience succeeds an earlier one is that though they are two moments, the transition from the one to the other is *continuous.* Continuity here is a definite sort of experience; just as definite as is the *discontinuity-experience* which I find it impossible to avoid when I seek to make the transition from an experience of my own to one of yours. In this latter case I have to get on and off again, to pass from a thing lived to another thing only conceived, and the break is positively experienced and noted. Though the functions exerted by my

[1] The psychology books have of late described the facts here with approximate adequacy. I may refer to the chapters on 'The Stream of Thought' and on the Self in my own 'Principles of Psychology,' as well as to S. H. Hodgson's 'Metaphysic of Experience,' Vol. I., Chap. VII. and VIII.

experience and by yours may be the same (*e. g.*, the same objects known and the same purposes followed), yet the sameness has in this case to be ascertained expressly (and often with difficulty and uncertainty) after the break has been felt; whereas in passing from one of my own moments to another the sameness of object and interest is unbroken, and both the earlier and the later experience are of things directly lived.

There is no other *nature*, no other whatness than this absence of break and this sense of continuity in that most intimate of all conjunctive relations, the passing of one experience into another when they belong to the same self. And this whatness is real empirical 'content' just as the whatness of separation and discontinuity is real content in the contrasted case. Practically to experience one's personal continuum in this living way is to know the originals of the ideas of continuity and of sameness, to know what the words stand for concretely, to own all that they can ever mean. But all experiences have their conditions; and oversubtle intellects, thinking about the facts here, and asking how they are possible, have ended by substituting a lot of static objects of conception for the direct perceptual experiences. "Sameness," they have said, "must be a stark numerical identity; it can't run on from next to next. Continuity can't mean mere absence of gap; for if you say two things are in immediate contact, *at* the contact how can they be two? If, on the other hand, you put a relation of transition between them, that itself is a third thing, and needs to be related or hitched to its terms. An infinite series is involved," and so on. The result is that from difficulty to difficulty, the plain conjunctive experience has been discredited by both schools, the empiricists leaving things permanently disjoined, and the rationalist remedying the looseness by their Absolutes or Substances, or whatever other fictitious agencies of union they may have employed. From all which artificiality we can be saved by a couple of simple reflections: first, that conjunctions and separations are, at all events, coordinate phenomena which, if we take experiences at their face value, must be accounted equally real; and second, that if we insist on treating things as really separate when they are given as continuously joined, invoking, when union is required, transcendental principles to overcome the separateness we have assumed, then we ought to stand ready to perform the converse act. We ought to invoke higher principles of *dis*union also, to make our merely experienced *dis*junctions more truly real. Failing thus, we ought to let the originally given continuities stand on their own bottom. We have no right to be lopsided or to blow capriciously hot and cold.

III. The Cognitive Relation

The first great pitfall from which such a radical standing by experience will save us is an artificial conception of the *relations between knower and known.* Throughout the history of philosophy the subject and its object have been treated as absolutely discontinuous entities; and thereupon the presence of the latter to the former, or the 'apprehension' by the former of the latter, has assumed a paradoxical character which all sorts of theories had to be invented to overcome. Representative theories simply shoved the subject-object gap a step farther, getting it now between the object and the representation. Common-sense theories left the gap untouched, declaring our mind able to clear it by a self-transcending leap. Transcendentalist theories left it impassible in the finite realm, and brought an Absolute in to perform the bridging act. All the while, in the very bosom of the finite experience, every conjunction required to make the relation intelligible is given in full. Either the knower and the known are:

(1) the self-same piece of experience taken twice over in different contexts; or they are

(2) two pieces of *actual* experience belonging to the same subject, with definite tracts of conjunctive transitional experience between them; or

(3) the known is a *possible* experience either of that subject or another, to which the said conjunctive transitions *would* lead, if sufficiently prolonged.

To discuss all the types, the ways in which one experience may function as the knower of another, would be incompatible with the limits of this essay.[2] I have just treated of type 1, the kind of knowledge called perception, in an article in this Journal for September 1, 1904. This is the type of case in which the mind enjoys direct 'acquaintance' with a present object. In the other types the mind has 'knowledge-about' an object not immediately there. Of type 2, the simplest sort of conceptual knowledge, I have given some account in two articles, published respectively in *Mind,* Vol. X., p. 27, 1885, and in the *Psychological Review,* Vol. II., p. 105, 1895.[3] Type 3 can always formally and hypothetically be reduced

[2] For brevity's sake I altogether omit mention of the type constituted by knowledge of the truth of general propositions. This type has been thoroughly and, so far as I can see, satisfactorily, elucidated in Dewey's 'Studies in Logical Theory' (Chicago, 1904). Such propositions are reducible to the *S*-is-*P* form; and the 'terminus' that verifies and fulfills is the $S = P$ as they feel in combination. Of course percepts may be involved in the mediating experiences, or in the 'satisfactoriness' of the *P* in its new position.

[3] These articles and their doctrine, unnoticed aparently by any one else, have lately gained favorable comment from Professor Strong in this Journal, for May 12, 1904. Dr. Dickinson S. Miller has independently thought out the same results, which Strong according dubs the James-Miller theory of cognition.

to type 2, so that a brief description of that type will put the present reader sufficiently at my point of view, and make him see what the actual experience-value and meaning of the mysterious cognitive relation may be.

Suppose me to be sitting here in my library at Cambridge, at ten minutes' walk from 'Memorial Hall,' and to be thinking truly of the latter object. My mind may have before it only the name, or it may have a clear image, or it may have a very dim image of the hall, but such intrinsic differences in the image make no difference in its cognitive function. Certain extrinsic phenomena, special experiences of conjunction, are what impart to the image, be it what it may, its knowing office.

For instance, if you ask me what hall I mean by my image, and I can tell you nothing, or if I fail to point or lead you towards the Harvard Delta, or if, being led by you, I am uncertain whether the Hall I see be what I had in mind or not, you would rightly deny that I had 'meant' that particular hall at all, even though my mental image might to some degree have resembled it. The resemblance would count in that case as coincidental merely, for all sorts of things of a kind resemble one another in this world without being held for that reason to take cognizance of one another.

On the other hand, if I can lead you to the hall, and tell you of its history and present uses; if in its presence I now feel my idea, however bad it may have been, to be *continued;* if the associates of the image and of the felt hall run parallel, so that each term of the one context corresponds serially, as I walk, with an answering term of the others; why then my soul was prophetic, and my idea must be, and by common consent would be, called cognizant of reality. That percept was what *meant,* for into it my idea has passed by conjunctive experiences of sameness and fulfilled intention. Nowhere is there jar, but every later moment matches and corroborates an earlier.

In this matching and corroborating, taken in no transcendental sense, but denoting definitely felt transitions, lies all that the knowing of a percept by an idea can possibly contain or signify. Wherever such transitions are felt, the first experience *knows* the last one. Where they do not, or where even as possibles, they can not intervene, there can be no pretense of knowing. In this latter case the extremes will be connected, if connected at all, by inferior relations—bare likeness or succession, or by 'withness' alone. Knowledge thus lives inside the tissue of experience. It is *made;* and made by relations that unroll themselves in time. Whenever certain intermediaries are given, such that, as they develop towards their terminus, there is experience from point to point of one direction

followed, and finally of one process fulfilled, the result is that their starting point thereby becomes a knower and their terminus an object meant or known. That is all that knowing (in the simple case considered) can be known-as, that is the whole of its nature, put into experiential terms. Whenever such is the sequence of our experiences we may freely say that we had the terminal object 'in mind' from the outset, even although *at* the outset nothing was there in us but a flat piece of substantive experience like any other, with no self-transcendency about it, and no mystery save the mystery of coming into existence and of being followed by other pieces of substantive experience, with conjunctively transitional experiences between. That is what we *mean* here by being 'in mind.' Of any deeper more real way of being in mind we have no positive conception, and we have no right to discredit our actual experience by talking of such a thing at all.

I know that many a reader will rebel at this. "Mere intermediaries," he will say, "even though they be feelings of continuously growing fulfilment, only *separate* the knower from the known, whereas what we have in knowledge is a kind of immediate touch of the one by the other, an 'apprehension' in the etymological sense of the word, a leaping of the chasm as by lightning, an act by which union is smitten into living being, over the head of the distinctness of its terms. All these dead intermediaries of yours are out of each other, and outside of their termini still."

But do not such dialectic difficulties remind us of the dog dropping his bone and snapping at its image in the water? If we knew any more real kind of union *aliunde,* we might be entitled to brand all our empirical unions as a sham. But unions by continuous transition are the only ones we know of, whether in this matter of a knowledge-about that terminates in an acquaintance, whether in personal identity, in logical predication through the copula 'is,' or elsewhere. If anywhere there were more absolute unions realized, they could only reveal themselves to us by just such conjunctive results. These are what the unions are *worth,* these are all that *we can ever practically mean* by union, by continuity. Is it not time to repeat what Lotze said of substances, that to *act like one* is to *be* one? Should we not say here that to be experienced as continuous is to be really continuous, in a world where experience and reality come to the same thing? In a picture gallery a painted hook will serve to hang a painted chain by, a painted cable will hold a painted ship. In a world where both the terms and their distinctions are affairs of experience, the conjunctions which we experience must be at least as real as anything else. They will be 'absolutely' real conjunctions, if we have no transphenomenal Abso-

lute ready, to derealize the whole experienced world by, at a stroke. If, on the other hand, we had such an Absolute, not one of our opponents' theories of knowledge could remain standing any better than ours could; for the distinctions as well as the conjunctions of experience would impartially fall its prey. The whole question of how 'one' thing can know 'another' would cease to be a real one at all in a world where otherness itself was an illusion.[4]

So much for the essentials of the cognitive relation, where the knowledge is conceptual in type, or forms knowledge 'about' an object. It consists in intermediary experiences (possible, if not actual) of continuously developing progress, and, finally, of fulfilment, when the sensible percept, which is the object, is reached. The object here not only *verifies* the idea, proves its function of knowing that object to be true, but the object's existence as the terminus of the chain of intermediaries *creates* the function. Whatever terminates that chain was, because it now is, what the idea 'had in mind.'

The towering importance of this kind of knowing for human life lies in the fact that an experience that knows another can figure as its *representative,* not in any quasi-miraculous 'epistemological' sense, but in the definite practical sense of being its *substitute* in various operations, yet leading to the same result. By experimenting on our conceptual experiences, or ideas of reality, we may save ourselves the trouble of experimenting on the real experience which they severally mean. The ideas form related systems, corresponding point for point to the systems which the realities form; and by letting an ideal term call up its associates systematically, we may be led to a terminus which the corresponding real term would have led to in case we had operated on the real world. This brings us to the general question of substitution, and some remarks on that subject seem to be the next thing in order.

IV. Sustitution

In Taine's brilliant book on 'Intelligence,' substitution was for the first time named as a cardinal logical function, though of course the facts had always been familiar enough. What now, exactly, in an absolute system of experiences, does the 'substitution' of one of them for another mean?

According to radical empiricism, experience as a whole wears the form of a process in time, whereby innumerable particular

[4] Mr. Bradley, not professing to know his absolute *aliunde,* nevertheless derealizes Experience by alleging it to be everywhere infected with self-contradiction. His arguments seem almost purely verbal, but this is no place for arguing that point out.

terms lapse and are superseded by others that follow upon them by transitions which, whether disjunctive or conjunctive in content, are themselves experiences, and must in general be accounted at least as real as the terms which they relate. What the nature of the event called 'superseding' signifies, depends altogether on the kind of transition that obtains. Some experiences simply abolish their predecessors without continuing them in any way. Others follow them more livingly, are felt to increase or to enlarge their meaning, to carry out their purpose, or to bring us nearer to their goal. They 'represent' them, and may fulfil their function better than they fulfilled it themselves. But to 'fulfil a function' in a world of pure experience can be conceived and defined in only one possible way. In such a world transitions and arrivals (or terminations) are the only events that happen, though they happen by so many sorts of path. The only function that one experience can perform is to lead into another experience; and the only fulfilment we can speak of is the reaching of a certain kind of end. When one experience leads to (or can lead to) the same end as another, they agree in function. But the whole system of experiences as they are immediately given presents itself as a quasi-chaos through which one can pass out of an initial term in many directions and yet end in the same terminus, moving from next to next by a great many alternative paths.

Either one of these paths might be a functional substitute for another, and to follow one rather than another might on occasion be an advantageous thing to do. As a matter of fact, and in a general way, the paths that run through conceptual experiences, that is, through 'thoughts' or 'ideas' that 'know' the things in which they terminate, are highly advantageous paths to follow. Not only do they yield inconceivably rapid transitions; but, owing to the 'universal' Character[5] which they frequently possess, and to their capacity for association with one another in great systems, they outstrip the tardy consecutions of the things themselves, and sweep us on towards our ultimate termini in a far more labor-saving way than the following of trains of sensible perception ever could. Wonderful are the new cuts and the short-circuits which the thought-paths make. Most thought-paths, it is true, are substitutes for nothing actual; they end outside of the real world altogether, in wayward fancies, utopias, fictions or mistakes. But where they do reenter reality and terminate therein, we substitute them always; and with these substitutes we pass the greater number of our hours.

[5] Of which all that need be said in this essay is that it also can be conceived as functional, and defined in terms of transitions, or of the possibility of such.

This is why I called our experiences, taken all together, a quasi-chaos. There is vastly more discontinuity in the sum total of experiences than we commonly suppose. The nucleus of every man's experience, the sense of his own body, is, it is true, an absolutely continuous perception; and equally continuous is his perception (though it may be very inattentive) of a material environment of that body, changing by gradual transition when the body moves. But the rest of the physical world is at all times absent from each of us, a conceptual object merely, into the perceptual realities of which our life inserts itself at points discrete and relatively rare. Round the nucleus, partly continuous and partly discrete, of what we call the physical world of actual perception, innumerable hosts of thinkers, pursuing their several lines of physically true cogitation trace paths that intersect one another only at discontinuous perceptual points, and the rest of the time are quite incongruent; and around the whole of the nucleus of relative 'reality,' as around the Dyak's head of my late metaphor, there floats the vast *nimbus* of experiences that are wholly subjective, that are non-substitutional, that find not even an eventual ending for themselves in the perceptual world—the mere day-dreams and joys and sufferings and wishes of the individual minds. These exist *with* one another, indeed, and with the objective nucleus, but out of them it is probable that to all eternity no inter-related system of any kind will ever be made.

This notion of the purely substitutional or conceptual physical world brings us to the most critical of all the steps in the development of a philosophy of pure experience. The paradox of self-transcendency in knowledge comes back upon us here, but I think that our notions of pure experience and of substitution, and our radically empirical view of conjunctive transitions, are *Denkmittel* that will carry us safely through the pass.

WILLIAM JAMES.

HARVARD UNIVERSITY.

DISCUSSION

IDEALISM AND REALISM

II. THE DISTINCTION OF OBJECT AND PERCEPTION

IN the preceding part of this article I replied to Dr. Montague's criticisms in so far as they relate to the validity of the physiological argument, and endeavored to show that in deference to this argument we must hold that, while physical objects are external to

the body, they are not external to the mind. I come now to Dr. Montague's account of my reasons for, as he calls it, 'rejecting the reality of sensible qualities.' And, first of all, I must protest against this way of stating my position. I do not 'reject the reality of sensible qualities,' but only their reality without the mind. Nor do I, as he says, hold to 'the correspondingly transcendent and mysterious character of the real things.' I hold, with Berkeley and Kant, that the objects we immediately perceive are the real things. But I hold, also with Berkeley and Kant, that these real things exist only as phenomena, as states of mind, and that these states of mind stand symbolically for realities beyond the mind. I should not wish to take Dr. Montague to task for a mere looseness of expression, but I think his conception of physical reality reveals itself here: things can not be real unless they are beyond the mind. What would Berkeley have said to the accusation that he denied the reality of sensible qualities? Has Dr. Montague forgotten Kant's distinction between the 'empirical reality' of matter and its 'transcendental ideality'? In truth, it is not I who deny the reality of perceived objects, but Dr. Montague, who tells us that, when we think we perceive a tree, what we really perceive is an event within our organism.

But to come to Dr. Montague's account of my reasons. He finds them to be three: (1) that the primary qualities can not be conceived without the secondary qualities, and that the secondary qualities are 'intrinsically subjective'; (2) that it would be multiplying worlds *praeter necessitatem* to believe that sensible qualities exist both within and without the mind; (3) that we can not imagine ourselves completely away from objects without their vanishing in our grasp. In reality, these are not my reasons for the view in question, but more or less suggestive remarks which I make by the way. My reasons are the physiological and what I call the metaphysical argument. Nevertheless, Dr. Montague's discussion of these remarks gives him an opportunity to make some taking points, and I am not sorry to be called upon to defend them.

As regards the first, Dr. Montague has slightly misunderstood me. My contention was not that the secondary qualities are 'intrinsically subjective in their nature,' but that they are *admittedly* subjective. That is, most persons admit that light, sound, heat and cold, etc., have no existence outside of the organism, but come into being only when the extra-bodily ether vibrations, sound-waves, etc., give rise to sensation. I can not agree with Dr. Montague that the reason why the secondary qualities have been considered subjective is because of their 'uselessness for purposes of prediction' or their 'regular and marked association with feelings of pleasure and pain.' It is solely because the stimuli that produce them have to be construed in terms

of the primary qualities. That is, it is not redness in the stimulus that enables it to call forth the sensation of red, but a certain wave-length of light; it is not objective sweetness in the sugar that enables it to call forth the sensation of sweet, but a certain chemical action. The hypothesis of an objective redness and sweetness is, therefore, otiose. It is more profitable to inquire in what sense the secondary qualities have been proved to be subjective. I can not go into the question here, but I think it would be found that the distinction of primary and secondary qualities is merely a branch of the physiological argument, and that the sense would at least include that of intra-mental.

I come next to the remark that it would be needlessly duplicating worlds to hold that sensible qualities exist both within and without the mind. Dr. Montague has missed the point of the remark. As he states it, the point would seem to be that there is something incredible, or contrary to the known economy of nature, in the production of resembling things, and therefore in the hypothesis that sensible qualities exist both within and without the mind. This is by no means my opinion. I agree with Dr. Montague that nature is prolific, and that there are a vast number of similar things in the world. My point was, rather, that when you set out to determine whether the physical world is an extra-mental or an intra-mental fact, and when you find, or think you find, that the only parts of it which can ever be immediately given to you are intra-mental facts, it becomes an unnecessary doubling of those parts to assume that they also exist as extra-mental facts. What you wished to know was whether the parts immediately given were extra-mental or intra-mental; you have found them to be intra-mental, and that settles the matter. Of course, if you confuse intra-mental with intra-bodily, and hold that the only objects we ever immediately perceive are intra-bodily facts, the desire to piece out this fragmentary physical world by assuming extra-bodily objects not wholly unlike those we immediately perceive must be very strong indeed.

I come, finally, to the third remark upon which Dr. Montague comments, and this to me is the most important and interesting part of his article, for his observations are neatly put and incisive, and they express a difficulty with the idealistic theory which seems to be very widely felt. They furnish me a welcome opportunity to say a few words on the current tendency to reject Berkeleianism in favor of a more or less naïve realism.

The remark was, that we can not completely imagine ourselves away from objects without their vanishing in our grasp. On this Dr. Montague comments as follows: "It is true that whenever I think of anything, there exists along with the thing thought of my

present act of thinking about it, but this either has no significance at all, for the reason that I can perceive my act of thinking to be extrinsically and, therefore, unessentially associated with its object and something to which I can pay more or less attention without the object changing at all, or else it means that I here and now can think of nothing at all as having reality or meaning of any kind that is not a part of my own consciousness at this present moment. Not only the physical world, but Socrates, my great-grandparents, my own past and future existence, are all nothing but aspects of my present psychosis. No one, and certainly no believer in things-in-themselves, could accept the extreme solipsism which this argument would mean, if it meant anything.'' Dr. Alexander's article contains a very similar passage: ''We are none of us solipsists; we believe that we know things and beings existing apart from ourselves; we believe that our knowledge means more than it is, that it stands for something beyond its immediate content. And if this is true, if there exists something which is not in our knowledge, something which is different from our knowledge of it, then that something is not dependent upon our consciousness for its existence.''

On these passages I observe that, as bearing on the question before us, they are vitiated by the fact that they fail to distinguish between perception and representative thought. They treat perception as if it were admittedly a case of representative thought. Now, the characteristic of representative thought is that it deals with an absent object. This being so, it is obvious that I can, not directly perceive, but reflectively recognize my act of thinking to be distinct from and 'unessentially associated with' the object with which it has to do; and to assert that the object of memory exists only as the remembering state, the object of expectation only as the subjective expecting, the thing conceived only as the conception, would of course be absurd. Dr. Montague has chosen his examples—Socrates, my past and future existence, etc.—with the express object of having them merely represented by thought, and not actually present. He chooses his great-grandparents rather than his grandparents because he has presumably seen the latter, and this would interfere with their being made effectually other than the thought. But now, the peculiarity of physical objects is that they are *not* merely thought of *in absentiâ,* but *actually present to consciousness* —as present as a toothache or a desire. That I can perceive a physical object so far as thus actually present to be other than my consciousness of it, by no means follows from the fact that I recognize objects of memory and conception to be other. Nor is the idealist who explains such presence by the fact that physical objects exist, like toothaches and desires, as states of consciousness in any way

committeed thereby to a solipsistic theory in the case of objects of thought.

To this it may be replied that the difference, while obvious enough, must be explained in some other way, since we do, in point of fact, distinguish between physical objects and the consciousness of them. But what right have we to assume that this is a distinction of two separate things, rather than a distinction of two different ways of regarding one thing?[1] We are told, of course, that we must separate the quality red from the sensation of red that is aware of it, the perception of a tri-dimensional book from the book itself. This, I regret to say, is something I have never been able to do. I quite appreciate that the *conception* of a quality is a different thing from the *conception* of a sensation, but it has always seemed to me that what we conceive in these two ways is the same identical *fact. I can not detect, over and above the quality red, any sensation or consciousness or subject that contemplates or has it; but it seems to me that the luminous existence of that red is the full account of the fact.* Nor can I detect any perception (though I can detect a certain amount of thought) over and above the given book. The givenness appears to me to be an inseparable character of the book, without which it could not exist at all. When I say, then, that the very same fact or experience can be thought of in two ways, either as an episode in my personal history, or as a constituent of a vast continuous physical world the other parts of which I only conceive, it seems to me that I am giving an account of the distinction which is idealistic, no doubt, but which differs from the realistic account in being accurately true to the facts.

Until quite recently I should have thought the foregoing a sufficient reply to the argument that we distinguish between physical objects and our consciousness of them. But I am coming to see that it does not concede to the realist all he has a right to demand, or at least that it does not adequately meet the difficulty in the idealistic position which he feels. A doctrine widely held, indeed the prevailing doctrine at present, makes of physical objects essentially objects of thought. Now, it can not be denied both that thought enters into our perception of objects—that perception, in other words, is a kind of conception—and that it is a general principle that objects of thought are distinct from the mental state which constitutes the thought of them. 'Knowledge,' says Dr. Alexander, 'means more

[1] Dr. Alexander cites, apparently with approval, Professor Mach's view that 'the data of physics and psychology are the same,' the only difference being 'in the kind of phenomenal interrelation studied.' This seems to me to be the correct view, but if Dr. Alexander accepts it he can hardly be the 'naïve realist' that Dr. Montague imagines him.

than it is, it stands for something beyond its immediate content'; and perception is a form of knowledge.

Let us for the moment admit this intellectualistic position, and let us inquire what exactly it establishes. For I think it would be hasty to assume that it establishes the independent existence of a material world. Knowledge may 'stand for something beyond its immediate content' in two ways: (1) when I think of a centaur or an absurdity, these objects of thought are, as Stout shows,[2] distinct from the thought of them; (2) when I think of another person's mind or of my past, the object of thought is not only distinct from the thought of it, but it exists or existed separately from the thought. In other words, thought has in the one case to do with an ideal object, in the other case with an eject. Now, even granting that matter as an object of thought is distinct from the thought of it, how does this prove that it exists as an eject, and not merely as an ideal object? How can we be sure that the physical world is anything more than a conceptual schema or framework that enables us to calculate the vicissitudes of our sensations? How can we be sure that the 'empirical reality' of matter is inconsistent with its 'transcendental ideality'?

It will be replied, I suppose, that matter is evidently not an object of thought in that ideal sense; it is an object of thought *that we see*. Perception involves sensation, and the object of sensation is distinct from the sensation itself. Let us grant this for a moment, and let us consider what exactly it is that has been proved. It has been proved that the object exists independently of the sensation at the time when the sensation exists, but it has not been proved that it exists at any other time. In other words, you have proved the independence of matter but you have not proved its continuous existence. But its continuous existence, it will be said, follows from its independence; if matter exists independently of sensation, then the cessation of the sensation does not carry with it the cessation of the matter. This seems to me a very hasty inference. Suppose the world were so constructed that physical objects and our perceptions of them always came into existence and passed out of existence together: would our experience be any different from what it is? Then you can not infer from our experience as it is that objects exist when we do not perceive them. How, indeed, could experience possibly inform us that objects exist when not experienced? Yet I presume experience is our source of knowledge about objects.

It will be replied that such a view destroys the reality of our knowledge of objects. So, no doubt, it does—the reality of our knowledge *of their continuous existence*. But the question is pre-

[2] 'Analytic Psychology,' Vol. I., p. 45.

cisely whether we have any such knowledge. In my opinion the only knowledge we have is such as we could legitimately have obtained from experience, namely, the knowledge *of their continuous perceptibility*. This knowledge, with all that it includes (and it includes the entire body of science), remains whole and unimpaired, and physical knowledge so far as justified is, therefore, as truly knowledge as ever. It is by a confusion of thought that the realist imagines that when he has proved the independence of matter he has proved a continuously existing physical world like that in which the plain man believes.

But he has not even proved the independence of matter, for it is impossible to admit the assumption on which his reasoning is based: that sensation has an object distinct from itself. It is a prineiple, unquestionably, that *thought* always has an object distinct from itself, but there is no corresponding principle applying to sensation. To separate between the sensation of red and the quality red in such a way as to have two distinct existences is an impossible feat. On the other hand, we have admitted that perception involves thought and that matter as an object of thought is distinct from the thought of it. The realist is therefore so far in the right. But it remains to be determined *in what shape* matter exists independently of the thought of it. Realists jump to the conclusion that it exists as matter-stuff, that their realism is naïve. This in no way necessarily follows from the admission of its independent existence, but the mode of existence still remains to be determined.

But the mode of existence, the realist will urge, is fully determined by the content or deliverance of the knowledge as such: it exists as matter and as independent of thought, and there is an end of the question. These indications would be final or rather sufficient, if there were not two distinct ways in which they might be fulfilled: by its existing as matter-stuff, and by its existing as sensation. Realists assume that there is a contradiction between objects being material and independent of thought, and their being composed of sensation; and they assume this because they confuse independence of thought with independence of the mind. Now, if it were possible for us to know that objects exist whether perceived or not, we might know them to be independent of the mind, and they could not then be composed of sensation. As it is, we only know them to be independent of thought, and this is perfectly consistent with their being composed of it.

The conclusion to which I am coming will now be apparent. We have seen that *thought has an object distinct from itself, but it does not present its object to us as real and present; that sensation presents to us an object that is real and present, but that object is not distinct from the sensation.* This being so, it seems to me that the

very simple solution of the difficulty between idealists and realists lies in holding that *matter exists independently of the thought of it, but exists in the shape of sensation*—in the shape, that is, of my sensation who experience the matter.

According to this view, matter exists for us in two distinct ways: as a sensational experience, and as an object of thought. These two ways are exactly analogous to the two relations in which we stand to our thoughts and feelings: (1) we may *have* (that is, *be*) a thought or feeling, and (2) we may *think about* it. When I think about one of my feelings, say a toothache, the object thought of exists independently of my thought of it, yet it exists as another (slightly earlier) state of my consciousness. In just the same way, the object of which I think when I think of matter (and this, whether my thought be a discursive one, or one of those fused thoughts that enter into the tissue of a perception) exists independently of the thought of it in the shape of another state (or portion of a state) of my consciousness, namely, sensation. When I think of matter I think of certain of my sensations. I think of them, of course, in a certain peculiar way, otherwise I should not think of them as matter; that is, I think of them in their relations to other similar sensations in my own and other consciousnesses.

Most authorities, following Kant (or at least a line of thought in Kant), recognize matter only as an object of thought; the sensations themselves they do not consider to be matter, but at most the raw material out of which matter is formed. I believe this intellectualistic view to be erroneous, and hold that the sensations alone are matter, and are the object which the thought of matter is about. The sensations are matter by standing to each other in certain relations, such as extensity, recurrence, etc. Now, my thinking of them in these relations does not constitute or establish the relations; the relations are there, in or between the sensations, whether I think of them or not. Matter is, therefore, not constituted by the thought (or perception, *i. e.*, conception) of it, but by the sensations which the thought is about.

The current low estimate of Berkeleianism seems to me to be due to the failure to keep these two relations of the mind to matter separate. Matter as composed of sensation is identical with the experience, consciousness, or (in that sense) 'perception' of it; this is the relation of the mind to matter of which Berkeley was thinking, and he is perfectly right with regard to it; there is no subject or consciousness distinct from the sensational experience and that is aware of it, but the sensational experience is itself an integral part of the mind or subject. Hence the delightful paradox of Kant (I do not know how this is to be reconciled with his intellectualism) that we

are aware of matter by means of self-consciousness.[4] To say, on the other hand, that matter as an object of thought (or of that conception which enters into perception) is identical with the thought or consciousness of it in that sense, is evidently absurd. But Berkeley never meant to say this; the consciousness to which he referred was not the intellectual consciousness by which we conceive matter, but the sensational consciousness by which it exists. The absurdity of Berkeleianism is therefore all from the point of view of a false intellectualistic theory.

To sum up: the proposition *esse* = *percipi* is ambiguous, in that the *percipi* may mean either *cogitari* or *sentiri*. Berkeley meant the word in the sense of *sentiri*, and thus interpreted the proposition is perfectly correct. Intellectualists take it in the sense of *cogitari*, and this makes the proposition absurd. They are perfectly right that no object of intellectual consciousness can ever be identical with the consciousness of it. But they must go farther. If the object is to have real existence, if it is not to be a purely ideal object, some way of existing must be found for it *in rerum naturâ* other than that which it has as merely an object of thought. Thus the very fact that the *esse* of matter can not be *percipi* in the intellectual sense makes it possible that it may be *percipi* in the sense of sensation. Finally, if we take account of the physiological argument set forth in the first part of this article, I think we see that it not only may but must be *percipi* in this sense.

Throughout this discussion of the relation of object and perception, I have abstracted from the fact—as I hold it to be—that our perceptions are symbolic of things-in-themselves to which they enable us to adjust our relations. I have abstracted from this fact because it was impossible to consider it without unduly complicating the discussion. Nevertheless, I think it probable that certain peculiarities in our way of regarding our perceptions are to be explained by the fact that they stand symbolically for things-in-themselves. Thus, the permanence or continuous existence which we have so strong a tendency to attribute to them arises, in my opinion, through a transference to the symbol of qualities which in truth belong only to the thing-in-itself. And if it is true, as I suppose it is, that we regard not only matter *quâ* object of thought but also matter *quâ* sensation as somehow other than ourselves, I think the explanation would be found to be that we have a habit of acting towards the latter as if it were the thing-in-itself for which it stands. But I will not enlarge further upon an aspect of the problem which I have discussed quite fully in Ch. XII. of 'Why the Mind has a Body.'

C. A. STRONG.

COLUMBIA UNIVERSITY.

[4] 'Kritik der reinen Vernunft,' ed. Hartenstein, p. 599.

REVIEWS AND ABSTRACTS OF LITERATURE

Die von M. von Rohr gegebene Theorie des Veranten, eines Apparats zur richtigen Betrachtung von Photographien. E. WANDERSLEB. *Verhandlungen d. D. Physikalischen Gesellschaft,* 1904, VI. Jahrg., Nr. 1, S. 44–60.

The Verant, a New Instrument for Viewing Photographs from the Correct Standpoint. DR. M. VON ROHR. *The Photographic Journal,* Nov., 1903, Vol. XLIII., pp. 279–290.

Der Verant, ein Apparat zum Betrachten von Photogrammen in richtigen Abstande. DR. A. KÖHLER. *Photographische Korrespondenz,* 1904, S. 9–20.

A good photograph is an exact *n*-fold reduction of an object as seen from the position of the photographic lense. It follows then that in front of the lense there is a position in which the photograph could be put so that each point of the photograph would exactly intercept the direct ray of light from the corresponding point of the object. And if the human eye is now put in the place of the photographic lense, it is clear that the rays from the photograph will meet the eye at exactly the same angles as would rays from the real object: while if the eye were either nearer to or farther from the photograph these angles would no longer be the same. There is, then, one correct distance and position from which the eye should view any photograph (and a photograph should be looked at with but one eye). But with our ordinary photographs this distance is from 10–16 cm., whereas only a very short-sighted eye can focus for an object so near. The normal eye has to view the photograph from a greater distance (about 26 cm. at least) than the correct one, and this introduces a perspective distortion which tends to exaggerate the depth of the picture or else, if the observer knows the actual depth, tends to make the background look too small and the foreground too large (but one eye still being used).

Now this distortion could be obviated by enlarging the photograph, as was proposed by G. S. Cundell in 1844. But enlarging is altogether too expensive and troublesome a process. Therefore, at the instance of Professor A. Gullstrand the firm of Carl Zeiss (Jena) has prepared the Verant lense (*verus,* true) for the monocular inspection of ordinary photographs, such that if picture, lense and eye are properly placed, the eye sees an enlarged virtual image of the photograph, whose rays meet the eye at the same angles as they would if proceeding from the actual object. The effect is said to be highly natural. In the case of distant objects this is, if accommodation is a factor in space sensation, helped out by the fact that the accommodation is now for infinity.

This principle has been successfully applied to the stereoscope and to the telestereoscope: and a binocular Verant is soon to be put on the market. In this instrument stereoscopic pictures are used and the miniature effect which is sometimes troublesome in the ordinary stereoscope, is obviated. Identical pictures may be put into it if they show

no foreground (that is, no objects nearer than the limits of purely binocular relief-perception), since otherwise the very principle of stereoscopy shows the picture flat. Corresponding to this refinement in viewing the stereoscopic pictures, these must now be taken with lenses whose distance apart is fairly close to the distance between the observer's eyes.

This instrument, which marks a great advance in the technique of reproductive art, is psychologically as well as physically interesting. A picture seen through the monocular Verant appears not only of natural size but also of natural depth. There is here no binocular stereoscopy, and Dr. von Rohr, who invented these lenses, ascribes this effect of depth to Helmholtz's representative factors (Vorstellungsmomente). This phenomenon shows how barbarous is the ordinary practice of viewing paintings and photographs with two eyes. The Verant will afford means of studying the perception of near objects with distant accommodation, whereas in previous stereoscopes the conditions have been the reverse. It remains, finally, to find out whether the fact that for distant objects in this stereoscope the two eyes are directed parallel, does not contribute as much to the viridical effect as does the enlargement of the picture, on which the inventor chiefly relies. For the apparent size of an object (as well as its apparent distance) depends on the convergence of the eyes, and in previous stereoscopes it has never been possible to adjust the pictures for parallel convergence, because of the therewith coordinated relaxation of the focus. It may be feared, however, that this last admirable feature may actually prevent the popular use of the Verant stereoscope, for it has been found that the untrained observer who looks into an ordinary stereoscope insists on converging sharply as if it were a newspaper, and generally needs some little practice before he is able to relax his convergence to even the slight degree required. This fact has for some time prevented the American firm of Underwood and Underwood from introducing stereoscopes with strongly magnifying prisms and more nearly parallel convergence.

The above three papers have nearly the same content; but that of Wandersleb has the fullest and clearest exposition.

EDWIN B. HOLT.

HARVARD UNIVERSITY.

L'evolution comme principe philosophique du devenir. W. M. KOZLOWSKI. *Revue Philosophique,* February, 1904, pp. 113–135.

The conception of evolution as a scientific theory is apparently of no value when applied to the universal syntheses with which philosophy deals. In the infinite reach of thought, the orderly changes which science perceives become fortuitous concourses of atoms. The author aims here to determine the philosophical significance of evolution in terms of a method which is based on the contradictions between the intuitional and discursive aspects of the theory.

For the first contradiction it may be said, on the one hand, that all observation of natural processes reveals an asymptotic principle of change. In general, neither an experience of the self nor a given state of the uni-

verse is ever exactly repeated. Thermo-dynamics furnishes the type-illustration of this in the phenomena of entropy, *i. e.*, the energy of a dynamic system is always escaping and becoming non-available, as far as this particular system is concerned. A clock runs down and the solar system approaches equilibrium. This equilibrium or *fin du monde* will prevent the repetition of any previous state. It is not possible, according to the second law of this science, to isolate perfectly a system, and, thereby, put its energy through a perfect cycle. On the other hand, if we pass from the sphere of direct observation to the realm of abstract thought and mentally grasp the universe as a totality, we find that the asymptotic principle of change has become a principle of periodicity. If the conception of the universe be all-inclusive, the energy of such a universe must be perfectly conserved, as there would be no external quantity with which it could interact. The first law of thermo-dynamics, which states the conservation of energy, conforms to this rational demand and furnishes a periodic principle of change.

In the problem of determinism appears the second contradiction treated between observation and thought. The asymptotic evolution of experience gives determinism. If we have components, we can determine resultants. If we know present conditions, we can previse the future, etc. Entropy seems to operate here also; we never get the whole body of conditions, and, hence, our prevision is imperfect. Passing again to the totality of the universe as grasped by thought, we find that this determinism becomes indeterminism. If the causal series is a circle, it amounts to no causation at all; while if we isolate the active principle from the causal series, we deny our assumption of totality.

Can thought isolate the universe? Do we experience a true conception of such isolation? What are the implications of the endeavor to grasp the conception of totality? Is there not entropy in thought processes as well as in dynamic processes? How can a quantity be isolated if it be not isolated from some other quantity either within or without it? Such questions indicate philosophy's future work. Its share in the solution of the contradictions between observation and thought is the investigation of the so-called demands of consciousness for unity, etc. As for science, it is yet sponsor for the second law in thermo-dynamics and the principle of entropy. Can it justify thought by producing a cycle?

These contradictions between intuition and discursive thought appear complete. Any present reconciliation must be one of method. Both science and philosophy should accept a 'critical methodological dualism' composed of these two factors. Let each endeavor to acquit the other. All departments of knowledge must work in harmony to resolve the dualism, if this be possible, and to indicate the better ways of regarding it, if it be inevitable.

This article indicates a tendency which even now outcrops, to call in question the fundamental conceptions of logic and mathematics. Science evidently expects philosophy to appropriate the asymptotic evolution of experience. This can be done only by a criticism of the demand of consciousness for unity. If, as Professor Seth has pointed out, experience

of unity is unknown, and the unitary self can not be isolated from experience, what is this but entropy in the field of knowledge?

PHILIP HYATT TARR.

COLUMBIA UNIVERSITY.

Skepticism of the Instrument. H. G. WELLS. *Mind,* July, 1904, pp. 379–393.

This paper was read before the Oxford Philosophical Society, November 8, 1903. It presents the philosophical foundations of one who would, if he did not feel this a 'quite preposterous modesty,' call himself a mere amateur in philosophy. According to his own account, the youthful training of Mr. Wells was entirely scientific and objective, and he came to reflect deliberately upon philosophical problems through the studies of educational method and theory, of logic and psychology that he made in preparing to take a teaching diploma. His studies of comparative anatomy and of evolution led him to regard all human powers as imperfect 'compromises and adaptations,' and this view still dominates him when he comes to the study of logic, causing him to mistrust seriously the efficacy of its methods as a means of attaining a correct view of objective facts. He is skeptical of the instrument on three counts. First, it proceeds by classification, and he doubts the objective reality of all classification. Things, in point of fact, are unique. Thought, working by classes, is continually in error. When its objects are near at hand, it can correct its errors by the check of practical results, but in philosophical or theological matters there can be no such check, hence it is like 'firing at an inaccessible, unmarkable and indestructible target with a defective rifle and variable cartridges.' A second count against logic is that it constantly thinks the negative as though it were something positive and real and full of meaning, whereas it is just that vague unknown which thought can not fathom. In consequence the mind is not justified in dealing with it as though it had positive content and value. Lastly, our ideas are on different levels, and when we attempt to deal with the same object by methods of thinking that are not on the same level, contradiction arises. It would be absurd to speak of cutting an atom in two with a knife. The atom is an object of conception, the knife of ordinary sensuous experience. The two ways of thinking are not to be fitted together thus. Now human logic is continually liable to just such absurdities, as witness the conflict between the theories of freedom and predestination.

Mr. Wells does not hesitate to extend his skepticism to morals and religion. There is no universal validity for human thought. One result of great value springs, Mr. Wells thinks, from this view. It is that the good and the sacred become more a matter of individual taste and judgment, 'ethical, social and religious teaching' is brought 'into the province of poetry,' and our sense of humor can rejoice in profound contradictions instead of being confined to petty issues. One may well feel that such an attitude, however diverting to a temporary mood, is hardly destined to be accepted by human intelligence as permanently satisfactory.

The scientific agnosticism of Mr. Wells is current, but he supplements it by some criticisms of logic that are used in a fresh and suggestive way. His acceptance of 'objective facts' without criticism of their constitution and meaning is naïve. On the whole, his view seems largely negative; so much so that he seems scarcely justified in regarding it as pragmaticism, although it is big with possibilities in that direction.

E. N. HENDERSON.

ADELPHI COLLEGE.

Nietzsches Lehre in ihren Grundbegriffen. Die ewige Wiederkunft des Gleichen und der Sinn des Übermenschen, Eine kritische Untersuchung. OSCAR EWALD. Berlin, Ernst Hofmann & Co., 1903. 141 pp.

There are two classes of books concerning the doctrines of any given thinker: those that do and those that do not presuppose on the part of the reader a knowledge of the subject in question. The present monograph belongs to the first class; it can hardly fail to be of value to anyone already familiar with Nietzsche's writings, it is practically useless as an introduction to them. There is much criticism but little exposition and the former is essentially constructive. What Nietzsche himself may have thought is subordinated to what in the author's opinion consistency and the logical consequences of his ideas demanded that he should think. The special doctrines chosen for consideration are the Overman and the Eternal Recurrence. These are represented as at first sight contradictories, in that the one posits constant development, the other constant return to previous stages. The final interpretation reconciles the seeming conflict by giving a symbolic meaning to both doctrines, of which the Recurrence thus becomes the esoteric form of the Overman. Both are ideals proposed to the will, not as some hard and fast product of future evolution, but as the formal end set for individual endeavor. The meaning of life as embodied in the Overman is no definite achievement but the constant readiness to surpass the man; and even more than the Overman the Eternal Recurrence is a symbol, never to be regarded in the light of actual physical events. The greatest possible test of the active will is the readiness to regard its activity as altogether limitless. Complete affirmation of life wills not merely for to-day but for countless ages without the shadow of change, nay, looks upon itself as altogether outside of time. This interpretation is not the usual one and Herr Ewald, while maintaining that it is based upon Nietzsche's writings, points out himself the many passages that contradict it; but in a study of philosophy rather than of a philosopher such a rejection of unsuitable portions of the text is admissible. The result might perhaps be regarded as a contribution to the prevailing voluntaristic philosophy, and, viewed from this aspect, has the merit of approaching the subject from a fresh standpoint. Its chief excellence as a Nietzsche-commentary is, in the reviewer's opinion, the energy with which all affinity between Nietzsche and Darwin is denied. In spite of the widespread tendency to regard Nietzsche's theories as the extension and application of the struggle for life and the survival of the fittest, such an interpretation is based upon

a misunderstanding of Nietzsche's most cherished convictions, and is perhaps itself due to the prevalence of a semi-Darwinian standpoint, which tends to regard all evolutionary theories as necessarily of the prevailing biological type.

G. N. Dolson.

Wells College.

Nietzsches Philosophie. Dr. Arthur Drews. Heidelberg, Carl Winter's Universitätsbuchhandlung, 1904. Pp. viii + 561.

Five hundred and fifty pages seem a good many to be devoted to Nietzsche by a man who regards his value as consisting chiefly in the warning he affords against false methods in philosophy. Dr. Drews finds Nietzsche's writings stimulating and full of clever bits of observation and reflection, but with no systematic basis that will stand against criticism. He gives an unusually detailed account of Nietzsche's views, following strictly the chronological order and dwelling at some length upon the corresponding events of Nietzsche's life. The criticism is altogether from the standpoint of Dr. Drews' own conviction that every pholosophy based upon the equation of consciousness and being is foredoomed to failure. Nietzsche, accordingly, is treated as the logical result of such attempts to dispense with the absolute. Endeavoring to embody his particular interpretation of *cogito ergo sum* in both his life and his philosophy, Nietzsche showed that its inevitable consequences are inconsistency in the one field and madness in the other.

G. N. Dolson.

Wells College.

JOURNALS AND NEW BOOKS

REVUE PHILOSOPHIQUE. August, 1904, Vol. 29, No. 8. *Morale et Biologie* (pp. 113–135): D. Parodi. – Largely a criticism of Metchnikoff's 'Études sur la nature humaine.' Its view of science is optimistic, but not its presentation of nature. The present century commences to emphasize the discords, not the harmonies of nature. Man, in particular, is displayed as an example of poor adaptation to natural conditions. Metchnikoff gratuitously asserts a normal duration of life; he can not really make clear what a death instinct is; he misunderstands the basis of the fear of death. Neither biology nor sociology really suffices to establish the ends of human life. *Le sourire; étude psychophysiologique* (2e et dernier article) (pp. 136–151): G. Dumas. – The development of the smile is to be explained on lines of economy of effort. It is most highly developed among the Japanese. All forms of the smile are compounds of the smile of pleasure and of the laughing smile; *e. g.*, the bitter, the defiant, the disdainful and the resigned smile. It is the laughing smile that is the source of the finer shades of expression in these various forms. The mechanical explanation of these developments is to be preferred to the psychological. *La logique du discours musical* (pp. 152–161): P. Landermy. – The philosophy of music has been despised thus fa.

in France. It is not a question of esthetics; for this logic of music precedes the study of the beauty of music. We organize the scale of sounds along lines similar to those on which we construct space, and this activity is just as worthy of the attention of the philosopher. It seems as though the soul did indeed 'count' in estimating the relations of sounds. *Les émotions de Bourse* (pp. 162–170): P. HATTENBERG. – The mentality of the French stock-exchange shares the general characteristics of crowds of less intellectual equipment. The inferior kinds of emotion prevail over the powers of judgment and reflection. *Les méthodes de la psychologie zoologique* (pp. 171–172): H. PIERON. – The business of the scientist is to predict; and the assumption of consciousness or the denial of its presence must be determined, for the scientist, entirely on that basis. *Analyses et comptes rendus* (pp. 173–216): G. Rodrigues, *L'idée de relation,* FR. P. L. Stein, *Der Sinn des Daseins,* L. ARRÉAT. P. Sollier, *Les phénomènes d'autoscopie,* FURSAC. P. Bonnier, *Le sens des attitudes,* DANTEC. H. Münsterberg, *Harvard Psychological Studies,* J. PHILIPPE. R. Koster, *Die Schrift bei Geisteskrankheiten,* FURSAC. E. Ackerknecht, *Die Theorie der Lokalzeichen,* L. POITEVIN. N. V. Viasemski, *Ismenenia organisma v periode sformivorania,* S. JANKELEVITCH. L. Dechesne, *La conception du droit et les idées nouvelles,* C. LALO. P. F. Thomas, *Pierre Leroux, sa vie, son ouvre, sa doctrine,* A. GODFERNAUX. E. Halevy, *La formation du radicalisme philosphique, t. III.,* F. PILLON. Also other shorter reviews. *Revue des périodiques étrangers.* Correspondence. Livres déposés.

THE PHILOSOPHICAL REVIEW. July, 1904. Vol. XIII., No. 4. *Jonathan Edwards* (pp. 393–408): F. J. E. WOODBRIDGE. – For a century and a half New England thought was dominated by Edwards, but at the present time his influence is largely negligible. "His work has failed not through refutation, but through inadequacy." This inadequacy results from the striking lack of connection between the really profound philosophy of Edwards' earlier years and his later Calvinistic theology. *The Psychological Nature of Causality* (pp. 409–419): W. B. PILLSBURY. – Accepting Hume's psychological method of investigation but rejecting its outcome, the author undertakes to point out anew the characteristics of the idea of causal connection. These are three – the first structural, the last two functional. Structurally the idea of a cause is always characterized by strain sensations. The functional conditions of the idea of causal connection are frequency of concurrence and harmony with other experience. In the dispute between parallelists and interactionists both parties appeal, in particular, to the last of these criteria. *Voluntarism and Intellectualism* (pp. 420–428): GUSTAV SPILLER. – Voluntarism and intellectualism are each one-sided. The truth is an organic unity of both. The intellectualists should realize that all science is utilitarian, and that judgment is always determined by need. The voluntarists, on the other hand, should understand that the needs and judgments of an individual must be harmonized with one another, with the needs of other individuals and with nature. *Discussions: Professor Bawden's Interpre-*

tation of the Physical and the Psychical (pp. 429–444): GRACE MEAD ANDRUS. – The author aims to show that Professor Bawden, in his attempt to give a new and simplified solution of the psychophysical problem, "presents no less than four distinct and mutually incompatible positions," and that "these inconsistencies may be traced to a fundamental ambiguity and shifting in the meaning of the chief terms employed, viz., 'experience,' 'function,' and 'tension.'" *The Identification of Mind and Matter* (pp. 444–451): MORTON PRINCE. – Dr. Prince concerns himself particularly with pan-psychism. He shows that we perceive what are really psychical facts, *e. g.*, feelings of pain, as brain events, because we perceive them visually; if we could perceive those same facts with our ears, we should experience them as sounds. In closing, the author emphasizes the anomalous nature of the phenomenon of motion. In the case of motion, the perceptual symbol and the reality perceived are homogeneous. Hence motion, alone among physical qualities, may be regarded as objectively real. *Reviews of Books. Summaries of Articles. Notices of New Books. Notes.*

BULLETIN DE L'INSTITUTE GÉNÉRAL PSYCHOLOGIQUE. June, 1904, Vol. VI., No. 3. *Les rudiments psychiques de l'homme* (pp. 233–254): E. METCHNIKOFF. – Corresponding to the hundred rudimentary, useless organs of the human body we may expect to find many rudimentary, useless activities of the human mind. These are aroused, especially, by the emotion of fear, particularly in its hysterical forms. Instances of somnambulism are cited in this connection; it is a return to an earlier animal state, just as is lactation of the glands in males. *Expérience sur un perroquet* (pp. 255–258): H. SOUPLET. – The parrot *created* a phrase appropriate to a certain experience. *De l'Opisthopsychisme* (pp. 258–269): M. R. BARON. – This is the theory that what triumphs in the struggle for life is not fallible reason, but precise automatism. Movements thoroughly learned are unconscious movements. *Intégration des sensations* (pp. 269–271): M. G. BOHN. *De l'idéalisation en psychologie* (pp. 271–274): M. G. BOHN. *Conditions psycho-physiologiques de l'observation de l'action des rayons N* (pp. 276–279): M. J. COURTIER. – A new preparation for such observations. *Les rayons N et l'anesthésie* (pp. 280–282): D'ARSONVAL. – Nervous interference they occasion. *De l'action des mains sur les microbes* (pp. 282–316): M. L. FAVRE. – A study of healing by 'laying on of hands.' To avoid suggestion, a microbe, the *subtilis,* was used in the experiments. The hand were kept still in the vicinity of the microbe. The effect varied with the health and with the pulse rate of the several operators. The left hand had more power. The more influence the operator exerts on men by his presence the more he affects the microbes. Faults in the experiments. Desiderata. *Télépathie et télégraphie sans fil* (pp. 316–318): A. FOUILEE. *Nécrologie. Livres donés. Sommaire des livres nouveaux.*

Carus, P. *Kant and Spencer.* Chicago: Open Court Publishing Co. 1904. 12mo. $0.25.

Grabowsky, Norb. *Lehren und Entdeckungen sowie ihre reformatorische Bedentung für Religion und Wissenschaft.* Leipzig: Spohr. 1904. 8vo. 1.20 m.

Jaëll, Marie. *L'intelligence et le rhythm dans les mouvements artistiques.* Paris: Alcan. 1904. 8vo. 2.50 fr.

Kingsland, J. P. *Man and his Environment.* London: J. Murray. 1904. 8vo. 7s. 6d.

Krische, Paul. *Excelsior, Kurzer, gemeinverstandl Abriss uber eine neue Religion u. Lebensphilosophie. I Bd.* Leipzig: Lotus-Verlag. 8vo. 4 m.

Schwabe, Max. *Die Körperschaft mit und ohne Persönlichkeit u. ihr Verhältnis zur Gesellschaft.* Basel: B. Schwabe. 1904. 8vo. 2 m.

Stern, W. *Über den Begriff der Handlung (S. A. aus "Philosoph. Aufsätze, hrsg. v. d. Philos. Gesellsch. zu Berlin, 1904.")* 27 + 8 pp.

Vorbrodt, G. *Beiträge zur religiösen Psychologie: Psychobiologie und Gefühl.* Leipzig: Deichert. 1904. 8vo. 3.69 m.

NOTES AND NEWS

Bruce R. Payne, who for two years past has been doing graduate work in philosophy and education at Columbia University, has been appointed to a professorship in William and Mary College.

Henry A. Ruger, formerly assistant in psychology at Columbia University has accepted a position in the department of psychology of Colorado College. G. Cutler Fracker, professor of philosophy at Coe College, Cedar Rapids, Iowa, will succeed Mr. Ruger, at Columbia.

We regret to announce that Dr. C. L. Herrick, editor of the *Journal of Comparative Neurology and Psychology,* died at Socorro, New Mexico, on September 15.

The psychological laboratory of the University of Minnesota was completely destroyed by fire, September 24. The loss includes apparatus and books valued at $2,000 as well as all records of experiments.